

Comparisons of Job Characteristics

Focus Occupation: [Mechanical Engineering Technicians \(17-3027\)](#)

Associated Occupation: [Engineers, All Other \(17-2199\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

| | |
|----|--|
| << | Focus occupation element is much lower |
| < | Focus occupation element is lower |
| 0 | Focus occupation element is at a similar level |
| > | Focus occupation element is at a higher level |
| >> | Focus occupation element is at a much higher level |

Knowledge

Similarity of Focus Occupation to Associated Occupation: 93

Focus Occupation: Mechanical Engineering Technicians (17-3027)

Associated Occupation: Engineers, All Other (17-2199)

| Associated Occupation's Key Knowledge Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | | Evaluation of Focus Occupation |
|--|---------------------------------|--------------------------------|---------------------------|----|--|
| Engineering and Technology | 5.7 | 20.1 | 16.1 | << | Extensive education and/or training may be required |
| Mathematics | 9.2 | 17.1 | 13.1 | << | Extensive education and/or training may be required |
| Design | 5.2 | 16.5 | 15.1 | 0 | Current knowledge level may be sufficient |
| Computers and Electronics | 8.4 | 15.0 | 10.8 | << | Extensive education and/or training may be required |
| Physics | 4.3 | 14.8 | 10.2 | << | Extensive education and/or training may be required |
| Mechanical | 6.8 | 14.0 | 18.0 | >> | Current knowledge level is likely more than sufficient |
| Production and Processing | 6.0 | 12.9 | 12.6 | 0 | Current knowledge level may be sufficient |
| Building and Construction | 4.0 | 6.6 | 6.9 | 0 | Current knowledge level may be sufficient |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 77

Focus Occupation: Mechanical Engineering Technicians (17-3027)

Associated Occupation: Engineers, All Other (17-2199)

| Associated Occupation's Key Skills Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | | Evaluation of Focus Occupation |
|---|---------------------------------|--------------------------------|---------------------------|----|--|
| Mathematics | 6.2 | 12.8 | 8.4 | << | Extensive development of skills in this area may be required |
| Systems Analysis | 6.5 | 11.7 | 7.5 | << | Extensive development of skills in this area may be required |
| Science | 4.5 | 11.4 | 7.5 | << | Extensive development of skills in this area may be required |

| | | | | | |
|---------------------|-----|------|-----|----|--|
| Systems Evaluation | 6.4 | 11.1 | 7.9 | << | Extensive development of skills in this area may be required |
| Operations Analysis | 5.0 | 10.8 | 6.8 | << | Extensive development of skills in this area may be required |
| Technology Design | 2.6 | 7.9 | 3.9 | << | Extensive development of skills in this area may be required |
| Equipment Selection | 3.3 | 6.3 | 6.2 | 0 | Current skill level may be sufficient |
| Programming | 2.2 | 5.3 | 2.1 | << | Extensive development of skills in this area may be required |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 91

Focus Occupation: Mechanical Engineering Technicians (17-3027)

Associated Occupation: Engineers, All Other (17-2199)

| Associated Occupation's Key Abilities Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | | Evaluation of Focus Occupation |
|--|---------------------------------|--------------------------------|---------------------------|----|--|
| Written Comprehension | 11.0 | 15.1 | 11.8 | << | Extensive improvement in abilities may be required |
| Deductive Reasoning | 10.6 | 15.0 | 12.2 | < | Some improvement in abilities may be required |
| Inductive Reasoning | 10.2 | 13.7 | 11.1 | < | Some improvement in abilities may be required |
| Mathematical Reasoning | 6.3 | 13.4 | 9.0 | << | Extensive improvement in abilities may be required |
| Information Ordering | 9.9 | 13.2 | 11.4 | < | Some improvement in abilities may be required |
| Category Flexibility | 9.0 | 12.3 | 10.7 | < | Some improvement in abilities may be required |
| Originality | 7.6 | 11.8 | 8.6 | << | Extensive improvement in abilities may be required |
| Visualization | 7.5 | 11.7 | 10.2 | < | Some improvement in abilities may be required |
| Number Facility | 6.3 | 11.6 | 9.7 | < | Some improvement in abilities may be required |
| Fluency of Ideas | 7.6 | 11.4 | 9.0 | < | Some improvement in abilities may be required |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

There are no common work activities.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 85

Focus Occupation: Mechanical Engineering Technicians (17-3027)

Associated Occupation: Engineers, All Other (17-2199)

| Tools and Technologies | Exclusivity |
|--|--------------------|
| Business function specific software | 1 |
| Chemical evaluation instruments and supplies | 10 |
| Computer data input devices | 2 |
| Computer printers | 2 |
| Computers | 1 |
| Content authoring and editing software | 1 |
| Cutting and crimping and punching tools | 3 |
| Development software | 4 |
| Electrical measuring and testing equipment | 7 |
| Electronic and communication measuring and testing instruments | 14 |
| Gas analyzers and monitors | 10 |
| Indicating and recording instruments | 2 |
| Industry specific software | 1 |
| Information exchange software | 1 |
| Integrated circuits | 18 |
| Laboratory environmental conditioning equipment | 24 |
| Length and thickness and distance measuring instruments | 2 |
| Light and wave generating and measuring equipment | 4 |
| Liquid and gas flow measuring and observing instruments | 15 |
| Machine tools | 7 |
| Machinery for working wood and stone and ceramic and the like | 12 |
| Mechanical instruments | 14 |
| Metals and metallurgy and structural materials testing instruments | 15 |
| Meteorological instruments | 16 |
| Network applications software | 1 |
| Non destructive examination equipment | 13 |
| Power conditioning equipment | 33 |
| Power tools | 2 |
| Rubber and plastic processing machinery and equipment and supplies | 35 |
| Soldering and brazing and welding machinery and supplies | 6 |
| Transducers | 23 |
| Viewing and observing instruments and accessories | 4 |

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.